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      Cadd, Gary G.
      Fioretti, William C.
      DeBoer, Kenneth F.
<120> Gene Regulation in Transgenic Animals Using a Transposon-Based
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<140> US 10/609,019
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| atctgcaata | aatccgagca | gtactgccgt | tttttcgccc | catttagtgg | ctattcttcc | 7260 |
| tgccacaaag | gcttggaata | ctgagtgtaa | aagaccaaga | cccgctaatg | aaaagccaac | 7320 |
| catcatgcta | ttccatccaa | aacgattttc | ggtaaatagc | acccacaccg | ttgcgggaat | 7380 |
| ttggcctatc | aattgcgctg | aaaaataaat | aatcaacaaa | atggcatcgt | tttaaataaa | 7440 |
| gtgatgtata | ccgaattcag | cttttgttcc | ctttagtgag | ggttaattgc | gcgcttggcg | 7500 |
| taatcatggt | catagctgtt | tcctgtgtga | aattgttatc | cgctcacaat | tccacacaac | 7560 |
| atacgagccg | gaagcataaa | gtgtaaagcc | tggggtgcct | aatgagtgag | ctaactcaca | 7620 |
| ttaattgcgt | tgcgctcact | gcccgctttc | cagtcgggaa | acctgtcgtg | ccagctgcat | 7680 |
| taatgaatcg | gccaacgcgc | ggggagaggc | ggtttgcgta | ttgggcgctc | ttccgcttcc | 7740 |
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| aaggcggtaa | tacggttatc | cacagaatca | ggggataacg | caggaaagaa | catgtgagca | 7860 |
| aaaggccagc | aaaaggccag | gaaccgtaaa | aaggccgcgt | tgctggcgtt | tttccatagg | 7920 |
| ctccgccccc | ctgacgagca | tcacaaaaat | cgacgctcaa | gtcagaggtg | gcgaaacccg | 7980 |
| acaggactat | aaagatacca | ggcgtttccc | cctggaagct | ccctcgtgcg | ctctcctgtt | 8040 |
| ccgaccctgc | cgcttaccgg | atacctgtcc | gcctttctcc | cttcgggaag | cgtggcgctt | 8100 |

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| <211>   | 908  |              |            |            |            |            |     |
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| <213>   | Arti | ificial Sequ | uence      |            |            |            |     |
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| <223>   | Synt | thetic       |            |            |            |            |     |
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| tgcatca | igtt | cagctacttg   | gctgcatttt | gtatttggtt | ctgtaggaaa | tgcaaaaggt | 120 |
| tctaggo | tga  | cctgcacttc   | tatecetett | geettaetge | tgagaatctc | tgcaggtttt | 180 |
| aattgtt | cac  | attttgctcc   | catttacttt | ggaagataaa | atatttacag | aatgcttatg | 240 |
| aaacctt | tgt  | tcatttaaaa   | atattcctgg | tcagcgtgac | cggagctgaa | agaacacatt | 300 |
|         |      |              | tacatatgtt |            |            |            | 360 |
| tcatgtg | rcgt | tggtgcacat   | atgaatacat | gaatagcaaa | ggtttatctg | gattacgctc | 420 |
| tggcctg | rcag | gaatggccat   | aaaccaaagc | tgagggaaga | gggagagtat | agtcaatgta | 480 |
| gattata | ctg  | attgctgatt   | gggttattat | cagctagata | acaacttggg | tcaggtgcca | 540 |
| ggtcaac | ata  | acctgggcaa   | aaccagtctc | atctgtggca | ggaccatgta | ccagcagcca | 600 |
| gccgtga | ccc  | aatctaggaa   | agcaagtagc | acatcaattt | taaatttatt | gtaaatgccg | 660 |
| tagtaga | agt  | gttttactgt   | gatacattga | aacttctggt | caatcagaaa | aaggttttt  | 720 |
| atcagag | atg  | ccaaggtatt   | atttgatttt | ctttattcgc | cgtgaagaga | atttatgatt | 780 |
| gcaaaaa | gag  | gagtgtttac   | ataaactgat | aaaaaacttg | aggaattcag | cagaaaacag | 840 |
| ccacgtg | rttc | ctgaacattc   | ttccataaaa | gtctcaccat | gcctggcaga | gccctattca | 900 |
| ccttcgc | :t   |              |            |            |            |            | 908 |
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caggtggagc tgggcggggg ccctggtgca ggcagcctgc agcccttggc cctggagggg 180 tccctgcaga agcgtggcat tgtggaacaa tgctgtacca gcatctgctc cctctaccag 240 ctggagaact ctgcaactag 260 <210> 22 <211> 50 <212> PRT <213> Artificial Sequence <220> <223> Synthetic <400> 22 Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro 5 10 Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Thr Thr 20 25 Cys Ile Leu Lys Gly Ser Cys Gly Trp Ile Gly Leu Leu Asp Asp Asp 35 Asp Lys 50 <210> 23 <211> 16 <212> PRT <213> Artificial Sequence <220> <223> Synthetic <400> 23 Ala Thr Thr Cys Ile Leu Lys Gly Ser Cys Gly Trp Ile Gly Leu Leu 10 <210> 24 <211> 30 <212> PRT <213> Artificial Sequence

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Pro Ala Asp Asp Ala
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                                     10
Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp
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| atgaggaaat             | tgcatcgcat  | tgtctgagta | ggtgtcattc | tattctgggg | ggtggggtgg | 1500 |
|------------------------|-------------|------------|------------|------------|------------|------|
| ggcagcacag             | caagggggag  | gattgggaag | acaatagcag | gcatgctggg | gatgcggtgg | 1560 |
| gctctatggg             | tacctctctc  | tctctctc   | tetetetete | tctctctc   | tctcggtacc | 1620 |
| tctctc                 |             |            |            |            |            | 1626 |
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| <213> Arti             | ficial Sequ | ience      |            |            |            |      |
| <220><br><223> Synt    | chetic      |            |            |            |            |      |
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| ttggttttt              | gtggatctgc  | tgtgccttct | agttgccagc | catctgttgt | ttgcccctcc | 120  |
| cccgtgcctt             | ccttgaccct  | ggaaggtgcc | actcccactg | teettteeta | ataaaatgag | 180  |
| gaaattgcat             | cgcattgtct  | gagtaggtgt | cattctattc | tggggggtgg | ggtggggcag | 240  |
| cacagcaagg             | gggaggattg  | ggaagacaat | agcaggcatg | ctggggatgc | ggtgggctct | 300  |
| atgggtacct             | ctctctctct  | ctctctct   | ctctctctct | ctctctctcg | gtacctctct | 360  |
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| <213> Arti             | ficial Sequ | ence       |            |            | •          |      |
| <220>                  |             |            |            |            |            |      |
| <223> Synt             | hetic       |            |            |            |            |      |
| <400> 29               |             |            |            |            |            |      |
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| ccgctacact             | tgccagcgcc  | ctagcgcccg | ctcctttcgc | tttcttccct | tcctttctcg | 120  |
| ccacgttcgc             | cggcatcaga  | ttggctattg | gccattgcat | acgttgtatc | catatcataa | 180  |
| atgtagatt              | tatattaaat  | astataassa | 2++244444  | +~++~~~    | ~~++-+     | 240  |

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ttaaatgatt tetatggegt caaaggteaa acttetgaag ggaacetgtg ggtgggteae 4920 aattcagget atatatteee cagggeteag eggateeatg ggeteeateg gegeageaag 4980 catggaattt tgttttgatg tattcaagga gctcaaagtc caccatgcca atgagaacat 5040 cttctactgc cccattgcca tcatgtcagc tctagccatg gtatacctgg gtgcaaaaga 5100 cagcaccagg acacagataa ataaggttgt tcgctttgat aaacttccag gattcggaga 5160 cagtattgaa gctcagtgtg gcacatctgt aaacgttcac tcttcactta gagacatcct 5220 caaccaaatc accaaaccaa atgatgttta ttegtteage ettgeeagta gaetttatge 5280 tgaagagaga tacccaatcc tgccagaata cttgcagtgt gtgaaggaac tgtatagagg 5340 aggettggaa eetateaaet tteaaaeage tgeagateaa geeagagage teateaatte 5400 ctgggtagaa agtcagacaa atggaattat cagaaatgtc cttcagccaa gctccgtgga 5460 ttctcaaact gcaatggttc tggttaatgc cattgtcttc aaaggactgt gggagaaaac 5520 atttaaggat gaagacacac aagcaatgcc tttcagagtg actgagcaag aaagcaaacc 5580 tgtgcagatg atgtaccaga ttggtttatt tagagtggca tcaatggctt ctgagaaaat 5640 gaagateetg gagetteeat ttgeeagtgg gacaatgage atgttggtge tgttgeetga 5700 tgaagtetea ggeettgage agettgagag tataateaac tttgaaaaac tgaetgaatg 5760 gaccagttct aatgttatgg aagagaggaa gatcaaagtg tacttacctc gcatgaagat 5820 ggaggaaaaa tacaacctca catctgtctt aatggctatg ggcattactg acgtgtttag 5880 ctcttcagcc aatctgtctg gcatctcctc agcagagagc ctgaagatat ctcaagctgt 5940 ccatgcagca catgcagaaa tcaatgaagc aggcagagag gtggtagggt cagcagaggc 6000 tggagtggat gctgcaagcg tctctgaaga atttagggct gaccatccat tcctcttctg 6060 tatcaagcac atcgcaacca acgccgttct cttctttggc agatgtgttt cccctccgcg 6120 gccagcagat gacgcaccag cagatgacgc accagcagat gacgcaccag cagatgacgc 6180 accagcagat gacgcaccag cagatgacgc aacaacatgt atcctgaaag gctcttgtgg 6240 ctggatcggc ctgctggatg acgatgacaa aaaatacaaa aaagcactga aaaaactggc 6300 aaaactgctg taatgagggc gcctggatcc agatcacttc tggctaataa aagatcagag 6360

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| tctggcccca | gtgctgcaat | gataccgcga | gacccacgct | caccggctcc | agatttatca | 9480  |
|------------|------------|------------|------------|------------|------------|-------|
| gcaataaacc | agccagccgg | aagggccgag | cgcagaagtg | gtcctgcaac | tttatccgcc | 9540  |
| tccatccagt | ctattaattg | ttgccgggaa | gctagagtaa | gtagttcgcc | agttaatagt | 9600  |
| ttgcgcaacg | ttgttgccat | tgctacaggc | atcgtggtgt | cacgctcgtc | gtttggtatg | 9660  |
| gcttcattca | gctccggttc | ccaacgatca | aggcgagtta | catgatcccc | catgttgtgc | 9720  |
| aaaaaagcgg | ttagctcctt | eggteeteeg | atcgttgtca | gaagtaagtt | ggccgcagtg | 9780  |
| ttatcactca | tggttatggc | agcactgcat | aattctctta | ctgtcatgcc | atccgtaaga | 9840  |
| tgcttttctg | tgactggtga | gtactcaacc | aagtcattct | gagaatagtg | tatgcggcga | 9900  |
| ccgagttgct | cttgcccggc | gtcaatacgg | gataataccg | cgccacatag | cagaacttta | 9960  |
| aaagtgctca | tcattggaaa | acgttcttcg | gggcgaaaac | tctcaaggat | cttaccgctg | 10020 |
| ttgagatcca | gttcgatgta | acccactcgt | gcacccaact | gatetteage | atcttttact | 10080 |
| ttcaccagcg | tttctgggtg | agcaaaaaca | ggaaggcaaa | atgccgcaaa | aaagggaata | 10140 |
| agggcgacac | ggaaatgttg | aatactcata | ctcttccttt | ttcaatatta | ttgaagcatt | 10200 |
| tatcagggtt | attgtctcat | gagcggatac | atatttgaat | gtatttagaa | aaataaacaa | 10260 |
| ataggggttc | cgcgcacatt | tccccgaaaa | gtgccac    |            |            | 10297 |

<sup>&</sup>lt;210> 30

## <400> 30

| ctgacgcgcc | ctgtagcggc | gcattaagcg | cggcgggtgt | ggtggttacg | cgcagcgtga | 60  |
|------------|------------|------------|------------|------------|------------|-----|
| ccgctacact | tgccagcgcc | ctagcgcccg | ctcctttcgc | tttcttccct | teettteteg | 120 |
| ccacgttcgc | cggcatcaga | ttggctattg | gccattgcat | acgttgtatc | catatcataa | 180 |
| tatgtacatt | tatattggct | catgtccaac | attaccgcca | tgttgacatt | gattattgac | 240 |
| tagttattaa | tagtaatcaa | ttacggggtc | attagttcat | agcccatata | tggagttccg | 300 |
| cgttacataa | cttacggtaa | atggcccgcc | tggctgaccg | cccaacgacc | cccgcccatt | 360 |

<sup>&</sup>lt;211> 10272

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Artificial Sequence

<sup>&</sup>lt;220>

<sup>&</sup>lt;223> Synthetic

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<sup>&</sup>lt;400> 32

| ctgacgcgcc | ctgtagcggc | gcattaagcg | cggcgggtgt | ggtggttacg | cgcagcgtga | 60  |
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| ccacgttcgc | cggcatcaga | ttggctattg | gccattgcat | acgttgtatc | catatcataa | 180 |
| tatgtacatt | tatattggct | catgtccaac | attaccgcca | tgttgacatt | gattattgac | 240 |
| tagttattaa | tagtaatcaa | ttacggggtc | attagttcat | agcccatata | tggagttccg | 300 |

<sup>&</sup>lt;210> 32

<sup>&</sup>lt;211> 10487

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Artificial Sequence

<sup>&</sup>lt;220>

<sup>&</sup>lt;223> Synthetic

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<sup>&</sup>lt;210> 33

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<sup>&</sup>lt;211> 315

<sup>&</sup>lt;212> DNA <213> Artificial Sequence

<sup>&</sup>lt;220>

<sup>&</sup>lt;223> Synthetic

<sup>&</sup>lt;400> 33

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|--|--------------|------------|------------|------------|------------|-----|
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| atcccattgc                                       | ctccc        |            |            |            |            | 315 |
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|  | rriciar sequ | ience      |            |            |            |     |
| <220><br><223> Synt                              | thetic       |            |            |            |            |     |
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| ggcaccaacc                                       | tggaaatcaa   | acgggctgat | gctgcaccaa | ctgtatccat | cttcccacca | 360 |
| tccagtgagc                                       | agttaacatc   | tggaggtgcc | tcagtcgtgt | gcttcttgaa | caacttctac | 420 |
| cccaaagaca                                       | tcaatgtcaa   | gtggaagatt | gatggcagtg | aacgacaaaa | tggcgtcctg | 480 |
| aacagttgga                                       | ctgatcagga   | cagcaaagac | agcacctaca | gcatgagcag | cacceteacg | 540 |
| ttgaccaagg                                       | acgagtatga   | acgacataac | agctatacct | gtgaggccac | tcacaagaca | 600 |
| tcaacttcac                                       | ccattgtcaa   | gagcttcaac | aggaatgagt | gttaa      |            | 645 |
| <210> 35<br><211> 657<br><212> DNA<br><213> Arti | ficial Sequ  | uence      |            |            |            |     |
| <220><br><223> Synt                              | hetic        |            |            |            |            |     |
|  | .HGCIC       |            |            |            |            |     |
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| tctgggtttt                                       | cattaaccag   | ctatggtgta | cactgggttc | gccagcctcc | aggaaagggt | 120 |

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